KENYA exports basil and other fresh produce to the European Union commanding about 35% of the total market share. Export of basil has constantly been under threat due to interceptions resulting from various live stages of *Liriomyza spp* and exceedances in pesticide residue levels. The study aimed at reducing infestation of by basil by *Liriomyza spp* through sustainable and food safe integrated management options. This was done by determining the effect of soil amendments and foliar feed sprays on damage by *Liriomyza spp* in addition to evaluating the efficacy of selected bio-pesticides together with polythene mulch and sticky traps in controlling infestation. Two separate field experiments were conducted in line with specific objectives and repeated once. Both experiments were laid out in a randomized complete block design (RCBD). Three treatments replicated three times were applied in the first experiment while nine treatments replicated three times were applied in the second. Soil amendments and foliar feed sprays significantly (P≤0.05) influenced the level of damage by *Liriomyza spp* on basil. The combined application of Di-ammonium phosphate with Chicken manure and foliar fertilizer recorded the highest number of leaflets (3.34 and 2.52) damaged during the first season and second season, respectively. Spraying neem alternated with spinosad combined with polythene mulch and yellow sticky traps significantly (P≤0.05) recorded the lowest number of damaged leaflets (1.47 and 1.46) in season 1 and 2, and the least number of *Liriomyza spp* larvae (1.07 and 1.15) damaging basil leaflets in season 1 and 2, respectively. The integrated application of neem, spinosad, polythene mulch and yellow sticky traps reduces infestation and damage of *Liriomyza spp* in basil and is recommended for addressing food safety, pesticide resistance and environmental concerns arising from the persistent use of chemical pesticides. Farmers while combining different nutrition regimes to realize high yields in basil should take necessary considerations not to increase infestation and damage by *Liriomyza spp*. 